

REMARKS

Claims 12-26 are pending. Claims 12-26 are rejected. Claims 1-11 have been previously cancelled without prejudice. Applicant requests reconsideration of the above claims in view of the arguments presented below.

35 U.S.C. 102(e) Rejections

Paragraphs 1 and 2 of the above referenced Office Action rejects Claims 12-26 as being anticipated under 35 U.S.C. 102(e) by Casselman (U.S. 2002/0156998). Applicant respectfully traverses.

Embodiments of the claimed invention are directed towards In Circuit Emulation (ICE) by using a method for communicating with a field programmable gate array (FPGA). As recited in independent Claim 12, for example, the method includes establishing an interface between a host computer and said FPGA, transmitting configuration information over the interface in a first transmission mode to configure the FPGA to function according to a programmed configuration, and transmitting operation information over the interface in a second transmission mode (emphasis added). Similar limitations are recited in independent Claims 19 and 23.

The in circuit emulation system of the present invention operates by the host computer establishing an interface with the FPGA and transmitting its configuration information over this interface (e.g., in the first mode). Subsequently, this same interface is used for transmitting operational information and the second mode. Thus, a common

interface is used for transmitting both the configuration information to the FPGA and transmitting operational information (or non-programming communication as recited in Claim 19) to the FPGA.

In contrast, Casselman appears to be directed towards a virtual computer comprised of a number of individual FPGAs (e.g., as described in figure 12 of Casselman). Applicant asserts that the FPGAs of Casselman have dedicated paths for receiving configuration data (e.g., programming information) and dedicated paths for transmitting and receiving operational data. Applicant points out that the FPGAs illustrated in figure 12 and described in the cited sections (e.g., paragraphs 0064-0066) of Casselman have different paths for their operational data versus their configuration data. Casselman figure 12 illustrates the reconfigurable controller 206. At Casselman paragraph 0063, the reconfigurable controller 206 is described as " ... a reconfigurable control section 206 governing the reconfiguration of all of the FPGAs and FPINs in the array 200 is capable of running software packages such as the LDG and FPID Pro software packages to generate the configuration bit files. Each configuration bit file thus generated is transmitted by the reconfigurable control section 206 to the corresponding FPGA or FPIN in the array 200." Thus, the reconfigurable controller 206 is dedicated to the generation of configuration bit data and the propagation of the configuration bit of data to the FPGAs.

Furthermore, the FPGAs are explicitly described as using a different mechanism for exchanging operational data and/or input output data (e.g., other than the

reconfigurable controller 206). For example, Casselman paragraph 0065 describes the FPGAs being connected to a number of banks of 32 user I/O pins. Applicants assert that these user I/O pins are used to perform the transmitting and receiving of operational data, or non-programming data. This is further described by the table in paragraph 0069 and the description in paragraph 0070 of Casselman. Hence, Applicant respectfully asserts that Casselman teaches at least two dedicated interfaces; one for configuration information (e.g., through the reconfigurable controller 206) and one for operational data (e.g., the user I/O pins linking each of the FPGAs together).

Accordingly, Applicant asserts that Casselman cannot be interpreted as having a an interface having a first transmission mode for transmitting configuration information over the interface in a first transmission mode to configure the FPGA to function according to a programmed configuration, and for transmitting operation information over the interface in a second transmission mode (emphasis added), as in the claimed invention. Thus, the present invention as recited in Claims 12-26 is not anticipated by Casselman within the meaning of 35 USC Section 102.

Conclusion

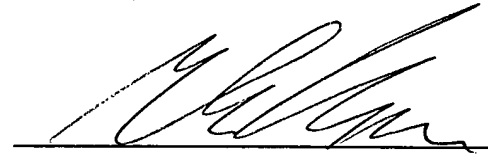
In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Glenn Barnes', is written over a horizontal line.

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